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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,516	08/26/2003	Hideaki Kojima	009270-0305497	2695

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PILLSBURY WINTHROP SHAW PITTMAN, LLP  
P.O. BOX 10500  
MCLEAN, VA 22102

EXAMINER

PAIK, STEVE S

ART UNIT PAPER NUMBER

2876

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/647,516	KOJIMA, HIDEAKI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Steven S. Paik	2876	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5-11,13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-11,13 and 15-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/27/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 27, 2006 has been entered.

### ***Response to Amendment***

2. Receipt is acknowledged of the Amendment filed January 27, 2006.

### ***Claim Objections***

3. Claim 5 is objected to because of the following informalities:

Replace the word, "onboard" in line 4 with -- on-board -- to be consistent with the rest of claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 5-11, 13, and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isobe et al. (US 6,019,285) in view of Harrell (US 6,609,655 B1).

Re claims 1 and 3, Isobe et al. disclose a card processing system (Fig. 1) using an IC card (IC card 20) capable of exchanging information through an electrical contact (interface part 21)

Art Unit: 2876

with an on-board unit (vehicle-mounted unit 10) installed in a vehicle using a toll road and a wireless communication (Abstract) with an antenna unit installed at a roadside (road side unit 60) of the toll road comprising, a first processor (control part 19) configured to execute at an entrance/exit of the toll road respectively (Abstract; col. 2, ll. 59-67; col. 6, ll. 5-43 ) an electronic toll collection process through the wireless communication with the on-board unit (10) by inserting the IC card (20) so as to electrical contact (via interface part 18) the on-board unit. Isobe et al. further disclose comparison/collation means for comparing and collating the on-board unit peculiar information (col. 4, ll. 18-42) that are stored in the on-board unit and the IC card (col. 4, ll. 35-63), and

means for storing the entrance information stored in the IC card in the on-board unit when peculiar information are matched by the comparison/collation means (col. 5, ll. 1-20).

The communication between the IC card and the roadside unit using a second processor when an error is generated in the process by the first processor is not specifically disclosed in the Isobe et al. reference.

Harrell discloses a multi-purpose smart card system (10 in Fig. 1) using an IC card (smart card 40) that can function in contact (via contact interface 41) or contactless (via contactless interface 42) communication. The system further comprises a plurality of processors each managing a unique function. For example, processor 20 communicates through the contact interface for processing travel and entertainment related products and services and processor 60 communicates through the contactless interface 42 for processing fare/toll/fee payment services. The capability undoubtedly increases its acceptability in various card-reading systems. In

Art Unit: 2876

addition, there is a tremendous amount of savings in cost and space since the card does not require two separate readers, contact type and contactless type.

In view of Harrell, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further employ a multi-purpose smart card system in addition to the card processing system of Isobe et al. due to the fact that data can be exchanged in contact or contactless communication protocol on a single IC card for the purposes of increasing the usability and acceptability of the IC card and saving cost and space since the card does not require two separate readers, contact type and contactless type.

Re claim 5, Isobe et al. in view of Harrell disclose the card processing system as recited in rejected claim 1 stated above, further comprising:

a comparison/collation means for comparing and collating the on-board unit peculiar information and entrance information that should have been stored in the on-board unit and the IC card (20), respectively when the IC card storing the entrance information obtained by the on-board unit (10) in the entrance processing at the entrance by the first processor (control part 19) is pulled out of the on-board unit (10) and inserted into the on-board unit again; and

means for storing a possibility of illegality in at least either one of the IC card (20) and the on-board unit (10) when at least either one of the on-board unit peculiar information and the entrance information is detected as being mismatch (col. 5, ll. 1-20 discloses the process of detecting vehicle type information and comparing the vehicle type information from the vehicle type detection apparatus with other vehicle type information included in the vehicle information received from the passing vehicle. A vehicle-mounted unit stores vehicle information, information of the registered vehicle-mounted unit, information regarding the entrance and the

Art Unit: 2876

exit, and information regarding an IC card. The comparing process verifies the aforesaid information stored previously.).

Re claim 6, Isobe et al. in view of Harrell disclose the card processing system as recited in rejected claim 3 stated above, wherein the second processor includes judging means for judging the exit process is possible by collating the information obtained from the IC card through the wireless communication with the IC card and the information obtained from the on-board unit before the exit process that is executed by the first processor is abnormally finished, and the exit processor to execute the exit process by determining a vehicle class from the information obtained from the IC card, further comprising:

means for storing information (Info. Rec. Part 22) of the result of the exit process by the exit processor (Fair/Toll/Fee payment processor 60) and the abnormally finished history information (Information of past usage record) in the exit process by the first processor (The vehicle-mounted unit saves the entrance, route, and exit information in the recording unit and a separate recording medium as a backup for the purpose of operating the toll system in a situation where the vehicle-mounted unit is malfunctioning.).

Re claim 7, Isobe et al. in view of Harrell disclose the card processing system as recited in rejected claim 1 stated above, further comprising:

notifying means for notifying that the IC card is not inserted in the on-board unit to a user of the IC card when peculiar information of the on-board unit was obtained by the first processor that is executed at the entrance of the toll road but the individual information of the IC card was not obtained (col. 5, ll. 24-46);

Art Unit: 2876

comparison/collation means for comparing and collating the peculiar information of the on-board unit stored in the on-board unit and the IC card when the IC card is inserted into the on-board unit (col. 5, ll. 1-20); and

warning means for warning the possibility of illegality for use of IC cards or on-board units (There is a step that executes a process for discharging the IC card if the IC card is not a suitable card. For example, if an automatic discharge mechanism is installed in the vehicle-mounted unit, the automatic discharge mechanism discharges the IC card automatically; otherwise, a buzzer generates the buzzer sound and display 14 indicates discharging of the IC card.).

Re claim 8, Isobe et al. in view of Harrell disclose the card processing system as recited in rejected claim 3 stated above, further comprising:

notifying means for notifying a user of the IC card that the IC card was not inserted in the on-board unit when peculiar information of the on-board unit was obtained by the first processor that is executed at the exit of the toll road but the peculiar information of the IC card could not be obtained (col. 5, ll. 24-46);

comparison/collation means for comparing and collating the peculiar information of the on-board unit stored in the on-board unit and the IC card (col. 5, ll. 1-20), respectively when the IC card is inserted into the on-board unit; and

warning means for warning a possibility of illegality for use of IC cards or on-board units when the on-board unit peculiar information are detected as being mismatched as a result of the comparison by the comparison/collation means (col. 5, ll. 1-20).

Art Unit: 2876

Re claim 9, Isobe et al. in view of Harrell disclose the card processing system as recited in rejected claim 1 stated above, wherein the second processor (Fair/Toll/Fee payment processor 60 of Harrell) is executed through the wireless communication with the IC card pulled out of the on-board unit and further comprising:

detecting means for detecting that the IC card is inserted into the on-board unit (col. 5, ll. 24-46);

means for storing peculiar information of the on-board unit stored in the on-board unit (Info Rec. Part 13) in the IC card (Info. Rec. Part 22) and individual card information stored in the IC card in the on-board unit when the detecting means detects that the IC card is inserted in the on-board unit;

comparison/collation means for comparing and collating the peculiar information of the on-board unit stored in the IC card and the peculiar information of the on-board unit stored in the on-board unit when the IC card is inserted in the on-board unit again after the second processor is executed with the IC card pulled out of the on-board unit (col. 4, ll. 17-63 disclose information recorded in the vehicle-mounted unit and the IC card.); and

warning means for warning possibility of illegality when the peculiar information of both the on-board units are detected as being mismatched as a result of the collation by the comparison/collation means (col. 5, ll. 1-16).

Re claim 10, Isobe et al. in view of Harrell disclose the card processing system as recited in rejected claim 1 stated above, further comprising:

detecting means (interface part 18) for detecting a contact defect by the communication through the electrical contact provided in the IC card (interface part 21);



Art Unit: 2876

reading means (road side units 30-50) for reading out the information stored in the IC card through an antenna provided in the IC card by the second processor (Fair/Toll/Fee payment processor 60 of Harrell) when the contact defect is detected by the detecting means (The IC card stores entrance, route, and exit information as a backup and communicates with road side unit in case the function of the vehicle-mounted unit is improper); means for sending the IC card information read by the reading means to an upper rank host computer for enquiry (col. 5, ll. 17-21); and

means for writing the IC card information in a separate new IC card and reissuing this IC card when the match is answered by the upper rank host computer in response to the enquiry made for the IC card (col. 6, line 44 – col. 7, line 14).

Method claims 11, 13, and 15-20 are essentially the same in scope as apparatus claims 1, 3, and 5-10 and are rejected similarly.

### ***Response to Arguments***

6. Applicant's arguments and amendments, see pages 10-13, filed January 27, 2006, with respect to the rejection(s) of claim(s) 1, 3, 5-11, 13, and 15-20 under 35 U.S.C. § 103(a) have been fully considered. It appears that previously cited prior arts still read on the amended claims.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven S. Paik whose telephone number is 571-272-2404. The examiner can normally be reached on Monday - Friday 5:30a-2:00p (Maxi-Flex\*).

Art Unit: 2876

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Steven S. Paik  
Primary Examiner  
Art Unit 2876

ssp